

IN THE CLAIMS:

1. (Currently Amended) A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 \text{CopCos} \leq 3.1 \times 10^6$$

where Cop (pF) is an electrostatic capacitance of the parallel-arm resonators, Cos (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

wherein the center frequency f_0 is in the 5 GHz band.

2. (Currently Amended) A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.3 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 \text{CopCos} \leq 3.1 \times 10^6$$

where Cop (pF) is an electrostatic capacitance of the parallel-arm resonators, Cos (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

wherein the center frequency f_0 is in the 5 GHz band.

3. (Currently Amended) A surface acoustic wave filter comprising series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 2.9 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance.

4. (Original) The surface acoustic wave filter as claimed in claim 1, wherein the ratio C_{op}/C_{os} of the electrostatic capacitance C_{op} to the electrostatic capacitance C_{os} is 0.5.

5. (Original) The surface acoustic wave filter as claimed in claim 1, wherein at least comb-like electrodes in the series-arm resonators and the parallel-arm resonators are covered with a dielectric film.

6. (Canceled)

7. (Original) The surface acoustic wave filter as claimed in claim 1, wherein the series-arm resonators and the parallel-arm resonators are connected to form a four-stage structure.

8. (Canceled)

9. (Canceled)

10. (Currently Amended) A filter device comprising:

a surface acoustic wave filter^{[[:]} ; and

a package to which the surface acoustic wave filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 2.9 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance L_i (nH) that satisfies conditions expressed as:

$$0.7 \leq L_i \leq 1.3.$$

11. (Currently Amended) A filter device comprising:

a surface acoustic wave filter^{[[:]} ; and

a package to which the surface acoustic wave filter is flip-chip mounted,
the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 3.1 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and

the microstrip line having an inductance L_i (nH) that satisfies conditions expressed as:

$$0.7 \leq L_i \leq 1.3.$$

12. (Currently Amended) A filter device comprising:

a surface acoustic wave filter[[:]] ; and

a package to which the surface acoustic wave filter is flip-chip mounted,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.3 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 3.1 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and
the microstrip line having an inductance L_i (nH) that satisfies conditions expressed as:

$$0.7 \leq L_i \leq 1.3.$$

13. (Currently Amended) A filter device comprising:
a surface acoustic wave filter[[:]] ; and
a package to which the surface acoustic wave filter is flip-chip mounted,
the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1.6 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 2.9 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal line formed by a microstrip line, and
the microstrip line having an inductance L_i (nH) that satisfies the conditions expressed as:

$$0.7 \leq L_i \leq 1.3.$$

14. (Currently Amended) A ~~The filter device as claimed in claim 8,~~
comprising:

a surface acoustic wave filter; and

a package to which the surface acoustic wave filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 3.1 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance L_i (nH) that satisfies conditions expressed as:

$$0.7 \leq L_i \leq 1.3$$

wherein the ratio C_{op}/C_{os} of the electrostatic capacitance C_{op} to the electrostatic capacitance C_{os} is 0.5.

15. (Currently Amended) The filter device as claimed in claim 8 14, wherein at least comb-like electrodes in the ~~series-resonators~~ series-arm resonators and the ~~parallel-resonators~~ parallel-arm resonators are covered with a dielectric film.

16. (Currently Amended) ~~A~~ The filter device as ~~claimed in claim 8,~~ comprising:

a surface acoustic wave filter; and

a package to which the surface acoustic wave filter is mounted by a wire bonding technique,

the surface acoustic wave filter including series-arm resonators and parallel-arm resonators that are connected in a ladder-like fashion,

the surface acoustic wave filter satisfying conditions expressed as:

$$1 \times 10^6 \leq 4 \pi^2 f_0^2 R^2 C_{op} C_{os} \leq 3.1 \times 10^6$$

where C_{op} (pF) is an electrostatic capacitance of the parallel-arm resonators, C_{os} (pF) is an electrostatic capacitance of the series-arm resonators, f_0 (GHz) is a center frequency, and R is a nominal impedance,

the package having a signal terminal connected to signal electrodes of the surface acoustic wave filter with one bonding wire, and

the bonding wire having an inductance L_i (nH) that satisfies conditions expressed as:

$$0.7 \leq L_i \leq 1.3$$

wherein the center frequency f_0 is in the 5 GHz band.

17. (Currently Amended) The filter device as claimed in claim 8 14, wherein the series-arm resonators and the parallel-arm resonators are connected to form a four-stage structure.

18. (Currently Amended) The filter device as claimed in claim 8 14, wherein the package is made of ceramics.